HANDOUT 3

Guidance for Integration Team
December 1, 2008

Introduction

At last week's Integration Team meeting, we had difficulty in articulating a common understanding of the task at hand. This paper by Jerry Johns, John Cain and Laura King Moon is intended to provide some guidance to help us be as efficient as possible over the next few weeks in helping shape the document SAIC will bring to the December 19 Steering Committee for concurrence.

Purpose of the Integration Team

The BDCP Integration Team is charged with providing guidance to the SAIC consultant team for purposes of developing a working draft of the BDCP Conservation Strategy. SAIC is charged with developing the working draft of the Conservation Strategy by mid-December, a critical milestone for maintaining the BDCP planning and related NEPA/CEQA schedule. The immediate purpose of the Integration Team is to help the consultant team construct and describe in detail the most critical elements of the Conservation Strategy, based on the suites of conservation measures developed by the three Working Groups on habitat restoration, conveyance, and other stressors. While the working draft Conservation Strategy will include all the conservation measures recommended by the Working Groups, it would be helpful if articulated as clearly as possible those measures that are considered to be essential to achievement of the BDCP goals and objectives, particularly in the early phases of BDCP implementation. Below we describe how the Integration Team can best use its time over the next few weeks to assist SAIC in developing this product.

We believe it would be most helpful for the Integration Team to focus the next two weeks on developing a preliminary "Core Plan", which describes the "core interactive elements" of the Conservation Strategy that are considered to be integral to achievement of the plan's biological and water supply goals. Core interactive elements are major features of the BDCP that would significantly influence hydrodynamic processes in the Delta ecosystem, would likely be implemented or operated under any BDCP planning scenario, are probably desirable as initial implementation elements, and would provide the architecture and context for considering implementation of many of the other Conservation Measures. The Core Plan will describe how the core interactive elements would interact to shape hydrodynamic and ecological processes in the Delta for the purpose of achieving the BDCP biological and water supply goals.

Purpose of Core Plan

1. Describe the basic architecture (core interactive elements), operations, and scientific rationale of a new hydrodynamic system upon which all conservation measures will ultimately be built. The scientific rationale would be linked to BDCP biological goals and objectives.

2. Provide a context in which to develop and evaluate a broad range of conservation measures during the BDCP planning stage. For example, if the core interactive elements increase predation mortality in a particular migration corridor, then predator control measures may be focused in that migration corridor.
3. Define the core interactive elements and underlying scientific rationale in enough detail for subsequent analysis in the EIR and DRERIP processes. .
4. Provide enough detail regarding specific core elements including key decision points, third party permitting issues, implementation strategies, and potential mitigation for consultants to develop an achievable plan for implementation of the core elements, which presumably will be a prerequisite of a permit
5. Describe and illustrate how additional conservation elements will be integrated into the core plan to develop a comprehensive Conservation Strategy. Provide examples of how some habitat and other stressor conservation measures would be integrated into the core plan.

Core Interactive Elements for Immediate Integration Team Focus

We propose that the Integration Team focus during the next two weeks on those core interactive elements that will affect the key hydrodynamic variables they are likely to control, in an effort to develop consensus on an initial set of parameters for those key hydrological variables. To facilitate progress, we have developed a proposed list of those elements on which it would be most helpful to the consultant team if the Integration Team could make some recommendations. While the list does not include elements addressing other stressors, we acknowledge that some of the Conservation Measures proposed for dealing with other stressors will likely be critical to the success of the BDCP. However, for purposes of the Integration Team's focus during the next two weeks, we recommend that the Integration Team request the Other Stressors Working Group to provide its recommended elements for the Core Plan, allowing the Integration Team to focus on the interaction of the core habitat and hydrodynamic elements.

Draft List of Core Plan Elements

1. Fremont Weir modifications and operations to increase frequency of inundation in the Yolo Bypass.
    a. Evaluate expected Sacramento River flows
    b. Propose Fremont Weir modifications to optimally increase Yolo inundation frequency
    c. Evaluate decreases in flow into the northern Delta in winter and spring.
    d. Evaluate increases in flow into Cache Slough in winter and spring.
    e. Evaluate increases in the area, frequency, and duration of inundated floodplain habitat.
    f. Evaluate residence times in Yolo Bypass and instream bypass flow needs.
2. New north Delta diversion facilities with fish screens.
    a. Evaluate expected Sacramento River flows above the diversion facilities including the Fremont Weir modifications.

   b. Evaluate decreases in flow and velocity in the Sacramento River below Hood.
   c. Evaluate decreases in flow and velocity in Steamboat, Sutter, and Georgiana Sloughs.
   d. Determine reductions in the entrainment of fish and food with the positive barrier fish screens.
   e. Evaluate the effects of increased residence time.
3. A Hood Bypass flow
   a. Maintains sufficient flow and velocity in Steamboat, Sutter, and Georgiana Sloughs.
   b. All other things being equal, increases outflow.
   c. Maintains desired residence time.
4. Delta Cross Channel operations.
   a. When open, decreases flow and velocity in Steamboat, Sutter, and Georgiana Sloughs.
   b. When open, increases flow in lower Mokelumne River
   c. When open, increases fresh water flow into Central Delta and Q-west on San Joaquin.
   d. When open in combination with South Delta exports, increases flow of freshwater into the South Delta via Middle River.
5. Large scale tidal marsh restoration in the Cache Slough area
   a. Decreases tidal excursion up Sacramento River and Steamboat and Sutter Sloughs, thereby increasing the frequency of unidirectional flow.
   b. Increases the tidal prism in Cache Slough and the Sacramento River below Rio Vista.
   c. Changes tidal phasing thereby shifting X2 (explain).
6. Large scale tidal marsh restoration in Suisun Marsh
7. Strategic tidal marsh restoration in the Western Delta
8. Delta outflow targets
9. South Delta exports
   a. Increases reverse flows in Old and Middle Rivers.

The Core Plan should describe these hydrodynamic variables in greater detail and hypothesize how these variables will improve or degrade conditions for covered species (outcome hypotheses). Wherever possible, the Core Plan should provide scientific citations (preferably from DRERIP or peer reviewed literature) that substantiate the outcome hypothesis. Where citations are lacking or insufficient to support the hypotheses, the Core Plan should describe a plan of action for substantiating the outcome hypotheses through further research or analysis.

Other Conservation Measures

In addition to the core interactive elements, there are other important conservation measures that are likely to determine the eventual success of the BDCP. The core conservation measures, along with all other conservation measures identified to date that

are carried forward for further consideration will be described in sections 3.3 and/or 3.4 of the Draft Conservation Strategy.

The Core plan will describe a process for integrating these other conservation measures with the core interactive elements and will include specific examples of how a range of different conservation measures would be integrated.

Subsequent drafts of the Conservation Strategy will describe important conservation measures in much greater detail.

Adaptive Management

The adaptive management section of the core plan will focus on articulating the scientific rationale for section 3.7 and 3.8 of the Draft Conservation Strategy. It will articulate hypotheses that explain the specific mechanism by which the core interactive elements, or the variables they determine, will improve or degrade conditions for covered species. The monitoring plan will then be developed in section 3.5 to measure and evaluate the mechanisms that hypothetically control the abundance of covered species.

Additional Flow Measures

There is a desire among some IT members to include Sacramento and San Joaquin River inflows as part of the Core Plan, but others disagree, as they are not part of the Planning Area and would probably be controversial and distracting. These issues may be considered later in light of how they could complement the implementation of the BDCP.

Schedule of Key Decisions on Core Plan by Integration Team

December 2:

December 9:

December 16: